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ABSTRACT

A contrastive analysis (CA) does not require commitment to directionality. Even asymmetrical interlingual correspondence can be handled by adirectional statements. If well executed, a CA is capable of handling three pairs of L2 learning phenomena: (1) going from language A to language B and vice versa; (2) productive and receptive command; and (3) effects of L1 and L2 and vice versa. CAs are bilingual competence models of language, and have no jurisdiction over matters of performance. A competence model has to do with mental organization of linguistic knowledge, is speaker-hearer neutral, and is removed from real-time constraints. A bibliography is appended. (Author/JB)

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DIRECTIONALITY IN CONTRASTIVE ANALYSIS

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(ABSTRACT)

It is argued that a well-executed contrastive analysis can illuminate three kinds of learning problem: i) Learning language B by native speakers of language A and vice versa. ii)Productive and receptive control of the foreign language. iii) Proactive as well as retroactive transfer. There is no need for contrastive analyses to be executed pairwise, to cater equally for two directionalities of learning. Being based on Competence models of language, contrastive analyses are not subject to the two psychologically relevant constraints of time and direction. Attempts to cater for directionality in contrastive analysis have led to descriptive imbalance and resultant distortion. None of the three steps involved in contrastive analysis - independent unilingual description, juxtaposition and contrastive statement - requires commitment to directionality. Even asymmetrical inter--lingual correspondence can be handled by adirectional statements.

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DIRECTIONALITY IN CONTRASTIVE ANALYSIS

CARL JAMES

The impetus for this paper came from my reading of Filipović' Preface to Volume 1 of The Contrastive Analysis of English and Serbo-Croatian (Filipović, 1975).

After spending three years on the Yugoslav Serbo-Croatian:English Contrastive project (1968-71), Filipović launched a Zagreb English: Serbo-Croatian Contrastive Project, the first phase of which is reported in the above publication. The difference between these two projects is one of directionality: in the first the target language was English, while in the second it is Serbo-Croatian. Now, we know that a number of Contrastive Analysis (CA) projects are being executed in several academic centres, and we are aware of the large number of published analyses, notably the University of Chicago Series (Ferguson, 1965). The question I wish to pose is whether all of these need to be duplicated to cater for learning in the obverse directionality. Or can we avoid this labour, by demonstrating that CAs are neutral in directionality, that is, inherently adirectional? I shall in fact argue that such is the case, on the grounds that any imbalance that manifests itself in a CA is not so much descriptive as interpretative. That is, the bias exerts itself after the CA has been executed, when we set about its pedagogic exploitation. This line of argument has the additional attractiveness of discarding the now current dualism of 'theoretical' and 'applied' CAs'): all CAs are 'theoretical' by virtue of being prepedagogical, and while these CAs can be applied in the pedagogical enterprise, the term "applied CA" is a misnomer. Applying a CA involves imposing a real-time and a one-direction learning dimension onto the hitherto neutral, adirectional CA.

Assumptions of Unidirectionality

Let us first consider Filipović' assumption that CAs are unidirectional. He concedes that the first (YSCECP) "...required as sound a study of the system of English (the TL), as of the system of Serbo-Croatian (the SL)" (Filipović, op.cit.:13). If equality of description is to be equated with adirectionality, then Filipovi seems to be arguing against himself. He goes on to suggest that equal depth and range of description of SL and TL was an ideal which could not be achieved, for practical reasons: "However, it must be emphasised that the target...was the

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1) For similar reasons, we could discard the broader dualism of 'pure' versus 'applied' linguistics. There is no science of applied linguistics, merely nonlinguistic techniques for applying linguistics.

English language and its problems viewed from Serbo-Croatian. Consequently, the source language has remained less well investigated, especially as regards a contrastive analysis". While I can appreciate that staffing problems may precipitate certain imbalances, I see no justification for the inference that CAs are sui generis unidirectional.

Filipović is not alone in assuming that CAs have inherent directionality. Sciarone, anticipating the Bucharest School (Nemser, Slama-Cazacu) of the "approximative system", advances theoretical arguments for giving descriptive priority to the TL. He argues that "If both languages are described beforehand, too much, i.e. superfluous work, is done for the sake of CA" (Sciarone, 1970:126). I interpret his remarks to refer to equal description of the two languages. He justifies his standpoint by arguing that we are not concerned with "how the NL is built up systematically on the grounds of similarity and difference, but with the question of how the language that is to be learnt is built up on the grounds of the same principles" (ibid). Sciarone is assuming the vantage-point of the FL learner, who is not, in this capacity, privileged to see the FL as a whole, but can only process those aspects of it with which he is gradually brought into contact. Sciarone seems to be overvaluing the descriptive component of the CA, seeing as its main function the description, for the learner, of the language he is learning. While there is no denying that the learner knows his L1 but is ignorant of many aspects of the target language, I see no point in taking this fact as a determinant of what a CA should be, for the simple reason that the CA is not for the learner, but for the course writer. The latter also is aware of the learner's extensive knowledge of his L1, but he is not so much interested in the nature of that knowledge as in the relations holding between knowledge of L1 and partial knowledge of L2.

Makkai (1971), like me, objects to the 'one-sidedness' of CAs, and I think she has in mind the University of Chicago CA series: "...the approach is often strictly one-sided. That is, the study....points out the problems an English speaker would have in learning German, but not vice-versa. And obviously the two sets of problems would be quite different She suggests that we should look to Zellig Harris' article "Transfer Grammar" (Harris, 1954) as a source of the contrastivists predilection for descriptive bias, but this would only explain bias toward the NL, to which transfer rules are applied to generate TL correspondents. Makkai shows that it is not necessary to have two sets of such rules (which is what Filipović is proposing) to cater for two directionalities, and that "in fact one set, which can operate in either direction, is the most practical

arrangements." (Makkai, op.cit.: 166). In other words, a CA should be composed of equations rather than operations, and subscribe to an IA rather than an IP model in Hockett's (1954) sense.

It could be argued that Makkai is overlooking the fact that CAs are executed in three steps. The first step is not properly speaking, part of the CA enterprise, but antecedent to it. This is the phase of independent descriptions of L1 and L2. Unlike Filipović and Sciarone, I can see no cogent case for descriptive asymmetry at this stage, and would insist on the two descriptions being equally 'delicate', as Halliday would say. Delicacy is a scale of descriptive detail, a scale with only arbitrary oradations. Practical matters of time and staff will determine the delicacy of L1 and L2 descriptions: but they should be equally delicate. The second step is the juxtaposing of these independently executed descriptions, or, more precisely, of equatable parts of them: what to equate, what categories shall appear on the left and right of these interlingual equations is determined by the tertium comparationis, of course, a problematic issue beyond the scope of this paper. This second step is the one Makkai (op.cit.) has in mind, and we note once again that it is essentially adirectional, since we are dealing with equations rather than with operations.

Now we come to the third step, which must be the operation of analysis. After all, analysis must come in somewhere, and the first two steps have involved unilingual description and equation respectively. What exactly goes on in contrastive analysis, and, of crucial interest to this paper, is what goes on unidirectional? Let us take some concrete examples of CA being performed:

1) Politzer (1972:93) lists possible contrasts between the "kernel sentences of L1 and L2" as follows:

A. "Constructions in L2 and L1 are expressed by different grammatical means".....

B. "Constructions in L1 and L2 are parallel".....

C. "The utilization of word order in English....
as opposed to word order in German....an example of contrasting utilization of word order"

D. "L1 and L2 overlap in their use of grammatical means"....

2) Stockwell et al. (1965:219) perform their CA of negation in Spanish and English as follows:

[In Spanish] "The negative element spreads through the entire phrase, attaching itself to every form that can be negated" :

No es nada fenomenal.
Yo no lo creo tampoco.
No hay nadie adentro

"English does not allow the spread of the negative element into other items in the phrase, though it can combine with certain pre-verbal adverbs and indefinite subjects" :

He didn't ever go
He never went
No one went

3) König (1972:58) writes: "In English there is a close connection between the grammatical subject and the theme (or topic) of a sentence....This is not the case in German. Thus in many cases an English subject noun phrase corresponds to a prepositional phrase in German" :

(This bet won me a lot of money
(Mit dieser Wette gewann ich viel Geld

I take these three statements to be typical and representative of CA being performed. And I fail to detect in any of them any commitment to directionality, for the simple reason that CA is adirectional if it is well-done.

The above examples, it might be argued, deal with symmetrical, or one-to-one, interlingual contrasts, and are therefore a special case, where the directionality issue does not arise. As Bowen and Moore (1968:23) suggest, where there is a 1:1 relationship between an item in L1 and its equivalent in L2, as pencil for lapiz,"One substitution is intrinsically no harder than the other" and it can "be considered reasonable to assume that the same path that takes you from language A to language B will take you back to Language A again." But what happens when there is no 1:1 relationship, but asymmetry, where two or more items in L1 equate with one item in L2, or vice-versa? Does not the need to take directionality into account arise when this happens? Bowen and Moore suggest that going from a simple to a complex system (in terms of the number of choices available) constitutes a difficulty, whereas the reverse directionality presents "a less demanding problem", although the Spaniard who "Translates both his sino and his pero as but" does feel "puzzlement about how people who speak such an underdeveloped language can really express themselves adequately." Wilkins (1972:194) reaches the same conclusion about the contrast between Russian, which has no articles, and English, which does: "The difference between Russian and English provides more problems for the Russian learning English than it does for the English speaker learning Russian." Wilkins sees the reason as this: "It seems to h

far more difficult to remember to put things in than it does to leave them out."

The two types of interlingual asymmetry referred to here are i) the one-to-many relationship, and ii) the zero-to-something relationship. Eac is a special case, of course, of the broad category of a less-to-more relationship. I would contend that all interlingual relationships are of this kind, and that the 1:1 relationship is almost nonexistent, as becomes evident as soon as we ask ourselves about the Spanish equivalent for English 'a pencil of light' or 'a pencil moustache', or indeed about the English equivalents filling the slot in the Spanish 'un lapiz de _____." But notice that Wilkins, like Bowen and Moore, talks of 'inserting' and 'omitting' linguistic categories. Such acts are indisputably aspects of linguistic Performance, and as such fall outside the scope of CA, which is a linguistic enterprise restricted to linguistic Competence.

The Competence Model and CA

A CA is carried out on two juxtaposed grammars, of NL and TL. A grammar is, in Chomsky's words: "a description of the ideal speaker-hearer's competence" or "the underlying system of rules that has been mastered by the speaker-hearer" (Chomsky, 1965:4). In fact, a CA is a statement of the difference in Competence holding between a speaker of language A and a speaker of language B.

There are three implications for CA of this Competence-orientation. The first is one that is unattractive to CA: the constant reference to the individual, as in: "Linguistic theory is concerned with an ideal speaker-listener" (Chomsky, op.cit.:3). This is where Chomsky differs from Saussure, for whom langue has some collective status. It is of course undeniable that mental organisation resides in the individual, and T-G grammarians consistently refer to the usage and intuitions of individuals. CA, however, is for obvious practical reasons concerned with groups rather than individuals, and this is why CAs are conducted on 'standard' versions of the two languages, often to the disregard of the individual who is not a speaker of the Standard.

Secondly, basing CAs on Competence models robs them at once of any 'psychological reality', since "A generative grammar is not a model for a speaker or hearer" and "when we say that a sentence has a certain derivation.....we say nothing about how the speaker or hearer might proceed, in some practical or efficient way, to construct such a derivation." Even the theory of derivational complexity has been shown to be vacuous (Greene, 1972), and Derwing (1973:283) concludes that "....almost all serious work along these lines has yielded spectacularly

negative results." These writers are speaking of monolingual Competence grammars: their pronouncements apply a fortiori to bilingual or CA grammars. One must conclude that where there is no derivation, there can be no question of a directionality. CAs represent not psychological processes but mental organisation of knowledge of L1 and L2.

I personally would fault Chomsky for using the terms 'speaker' and 'hearer' at all: speaking and hearing are aspects of performance, and it is not possible to reinstate these notions within Competence merely by qualifying the term 'generate' as being neutral between the two, as Chomsky does. One wonders why Chomsky did not avoid the bipartite hyphenated term 'speaker-hearer' and use 'language knower' (c.f. natürlicher Sprachtrager) instead, since it is knowing, more precisely Gilbert Ryle's 'knowing that', which Competence specifies.

The third property of a CA, then, is that it is neutral between speaker and hearer, or between productive and receptive linguistic control, which is an additional reason for not expecting it to have any directional bias. It is the receptive/productive or encoding/decoding dichotomy that Corder has in mind, when he writes of 'active' and 'passive' knowledge [2]; he suggests that "a native speaker of English....may have an ability to discriminate between loch and lock when he hears the two words, but himself rarely produce the sound [X] when he speaks" (Corder, 1973: 230). Others have remarked on this apparent asymmetry between a learner's receptive and productive modes. Nickel (1971:190) notes that where two languages are very similar, this "will help in the decoding process but might well present great difficulties in the encoding process." Briere (1968:73) noticed that"....the production of sounds in isolation always preceded perception of sounds in the TL system", a finding contrary to Corder's (q.v.) claim. And Nemser (1971:94) takes it as proof of the nonpredictiveness of CAs that his Hungarian subjects perceived English / θ / / ʒ / as labial fricatives but reproduced them asapical stops in 90% of renderings, from which he concludes an "apparent independence of the perceptual and productive modalities" (ibid.:95).

The answer to these observed asymmetries may lie with Lado. He states, in connection with the German's learning of English /i/ and /I/ that "Perception of the contrast may take place through some accompanying feature, which, although phonemic in the native language, in the foreign language is nonphonemic" (Lado, 1957:21). Compare German and English /i/: /I/. In German the distinction is maintained mainly by a contrast in length: "vowel length is phonemic in German" (Lado, ibid:22) and "differences in the length of stressed vowels are very striking, and they underlie the customary description of German vowels as 'short' and 'long'

(Moulton, 1962:63). In English, however, "....the qualities of the long and short vowels are often different....so length is not the only distinctive feature, perhaps not even the main one" (O'Connor, 1973:197).

2) But knowledge, viewed as mental organisation, can be neither 'active' nor 'passive', which are aspects of the enactment of that knowledge. The main feature distinguishing /i/:/I/, and other pairs of vowels in English, is tenseness as opposed to laxness. Now tenseness, or articulation with relatively great muscular energy, usually implies (but need not) length: this is why the German learner of English can perceive English /i/. But the same fortuitous association of length with tenseness in the speech of English natives he hears can not, of course, come to his assistance when he tries to produce /i/ himself. The point I wish to make is that there need be no mystique surrounding the apparent asymmetries between 'perceptio blindspots' and 'production disorders': a good CA, one which takes due account of the structure of the learner's linguistic knowledge (his Competence), will be able to handle each with equal confidence. There is no need to produce duplex CAs for production and reception.

It was the psychologist Osgood (1949) who noticed the remarkable reciprocity obtaining between proactive and retroactive transfer effects. Where the relationship between two learning tasks is such that proaction yields positive transfer, so likewise retroaction will yield positive transfer. For Osgood proaction is associated with learning and retroaction with forgetting or 'oblivescence', whereas contrastivists have interpreted the distinction in terms of L1 effecting L2 and L2 effecting L1 respectively. Jakokovits (1969) refers to the latter with the vivid term 'backlash' interference, and while it is not the major concern of classroom or 'artificial' FL learners, it is widespread in effect on the L1 of immigrant communities where the L1 assumes "a form that makes a resident of the.....country of origin smile" (Christophersen, 1973:57). And in this context of the Osgood paradigms as relevant to CA (James, 1976) it is worth mentioning that paradigm A, which assumes identity of responses between tasks, can be taken to represent the receptive mode, while paradigm B, where stimuli are constant and responses varied, can represent the productive. Once again notice the remarkable symmetry between the two paradigms, when interpreted in this way, all pointing to justification for monolithic CAs rather than duplex ones.

There is ample empirical support for the adirectionality of CAs, in the form of evidence that an interlingual contrast precipitates strikingly similar learning problems regardless of the 'directionality' of the learning. Consider the contrast between the laterals of German and English. Each language employs the lateral phoneme, but there are

allophonic differences, German lacking the 'dark' variant [ɫ] characteristic of word-final position in English. Consequently, Englishmen say [fot] for 'vou' while Germans produce an Irish-like [fʏl]. In terms of a CA , we have an asymmetry, English [l] and [ɫ] corresponding to German [l], but in terms of accentedness each learner errs in the assignment of one phonological feature. The second example is slightly more complex, and more cogent. English lacks /ɲ/ (the palatal nasal) so that the Englishman renders French 'digne' as [dinjə]; French lacks /ŋ/ (the velar nasal) except after a nasal vowel, as in 'langue' [lãŋ], so the Frenchman's attempt at English 'sang' results in [sɑ̃ŋgə]. In fact, each learner's effort results in the same solution: for an alien nasal consonant, the substitution made is: [nasal] + [homorganic consonant] + [ə]; that is

$$\text{Alien L2 consonant} \begin{matrix}[ŋ] \\ [ɲ]\end{matrix} \longrightarrow \begin{matrix}[n] \\ \text{nasal} \\ [n]\end{matrix} + \begin{matrix}[g] \\ \text{homorg. cons} \\ [j]\end{matrix} \begin{matrix}\text{(velar)} \\ + [ə] \\ \text{(palat)}\end{matrix}$$

Conclusion

The principle of unidirectionality has been a constant source of embarrassment to contrastivists. It is hard to understand why they have clung to it so tenaciously when to abandon it would have resolved a major issue of contention. I refer to the claim that Weinreich's (1953) and Haugen's (1956) work on bilingualism can not validly be extrapolated into a theory of CA, since the directionalities are different: their work is concerned with the effects of the L2 (English) on the NL of the immigrant, while Lado's (1957) concern is with how L1 effects L2. This is the caveat of Dulay and Burt (1974:102) when they quote Haugen (1953:363):"...it is the language of the learner that is influenced, not the language he learns." In fact, Dulay and Burt are vulnerable on several counts: they are guilty of selective commentary in failing to quote Weinreich (ibid:88): "It is a conclusion of common experience....that....the mother tongue is in a privileged position to resist interference"; and Dulay and Burt are overlooking the crucial distinction between interference and integration. My point, however, is that it is <u>irrelevant</u> that the directionalities incidental to bilingual studies and CA are different: rather than seeking to discover directionality-specific laws, the CA theorist should be concerned with static <u>relationships</u> (equations) between the systems of NL and TL.

In this paper I have argued that CAs, if well executed, are capable of handling equally well three pairs of L2 learning phenomena.

1) Going from language A to language B and vice-versa.

ii) Productive and receptive command.

iii) Effects of L1 on L2 and vice-versa.

My justification is that CAs are bilingual Competence models of language, and as such have no jurisdiction over matters of Performance. A Competence model of language, whether monolingual or bilingual in scope, has to do with mental organisation of linguistic knowledge, is speaker-hearer neutral, and is removed from real-time constraints. Unless I am right, we shall have to start planning octagonal CAs: 2 for direction x 2 for production/reception X: 2 for proaction/retroaction. I think CA is already too difficult without complicating it further.

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